1.  A method for estimating an image illuminant, the method comprising:

  forming an illuminant set comprising data describing a plurality of candidate illuminants;

  analyzing an image in relation to said plurality of candidate illuminants to determine a plurality of match scores for said plurality of candidate illuminants;

  fitting a surface to said plurality of match scores, said surface representing illuminant values other than said candidate illuminants; and

  determining a point on said surface, said point corresponding to the data representing a likely illuminant for said image.


2.  A method as described in claim 1 wherein said illuminant set is a design matrix for a predetermined set of illuminants.


3.  A method as described in claim 1 wherein said illuminant set is a matrix of monomial basis functions in the color coordinates of each of said candidate illuminants.


4.  A method as described in claim 1 wherein said analyzing comprises forming an image histogram of image element color coordinates relative to color coordinate distributions under said candidate illuminants.


5.  A method as described in claim 1 wherein said fitting a surface comprises a best-fit least squares method.


6.  A method as described in claim 1 wherein said fitting a surface comprises taking a weighted average of the match scores of the candidate illuminants.


7.  A method as described in claim 1 wherein said determining a point on said surface comprises locating surface extremum.

8. A method as described in claim 7 wherein said method of locating said surface extremum comprises forming derivatives of said surface and setting them equal to zero to locate surface extremum.

9. A method as described in claim 1 wherein said determining a point on said surface comprises solving for the color coordinates of an extrema on said surface and,

choosing the point of the extrema when the coordinates of said extrema are closer to the reference illuminant coordinates than the closest candidate illuminant coordinates; or

choosing the point of the closest candidate illuminant coordinates when the closest candidate illuminant coordinates are closer to the reference illuminant that the extrema.

10. A method for estimating an image colorbalance correction, the method comprising:

forming an illuminant set comprising data describing a plurality of candidate colorbalance corrections;

analyzing an image in relation to said illuminant set to determine a plurality of match scores for said plurality of candidate colorbalance corrections;

fitting a surface to said plurality of match scores, said surface representing colorbalance correction values other than said candidate colorbalance corrections; and

determining a point on said surface, said point corresponding to the data representing a likely colorbalance correction for said image.

11. A method for estimating an image illuminant, the method comprising:

forming a design matrix comprising the parameters of a plurality of candidate illuminants;

computing an image histogram comprising data relating the frequency of image element color values to color values found under said candidate illuminants;

determining match scores for said plurality of candidate illuminants;

fitting a surface to said match scores, said surface representing illuminant parameter values other than said candidate illuminants;

solving for an extremum of said surface; and

choosing the coordinates of said extremum as the parameters of an estimated image illuminant.


12. A system for estimating an image illuminant, the method comprising:

an illuminant set comprising data describing a plurality of candidate illuminants;

an analyzer for analyzing an image in relation to said plurality of candidate illuminants to determine a plurality of match scores for said plurality of candidate illuminants;

a fitter for fitting a surface to said plurality of match scores, said surface representing illuminant values other than said candidate illuminants; and

a processor for determining a point on said surface, said point corresponding to the data representing a likely illuminant for said image.


13. A set of executable instructions for estimating an illuminant of an image, said instructions comprising the acts of:

forming an illuminant set comprising data describing a plurality of candidate illuminants;

analyzing an image in relation to said plurality of candidate illuminants to determine a plurality of match scores for said plurality of candidate illuminants;

fitting a surface to said plurality of match scores, said surface representing illuminant values other than said candidate illuminants; and

determining a point on said surface, said point corresponding to the data representing a likely illuminant for said image.